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June 1964

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PHOTOGRAPHIC INTERPRETATION REPORT

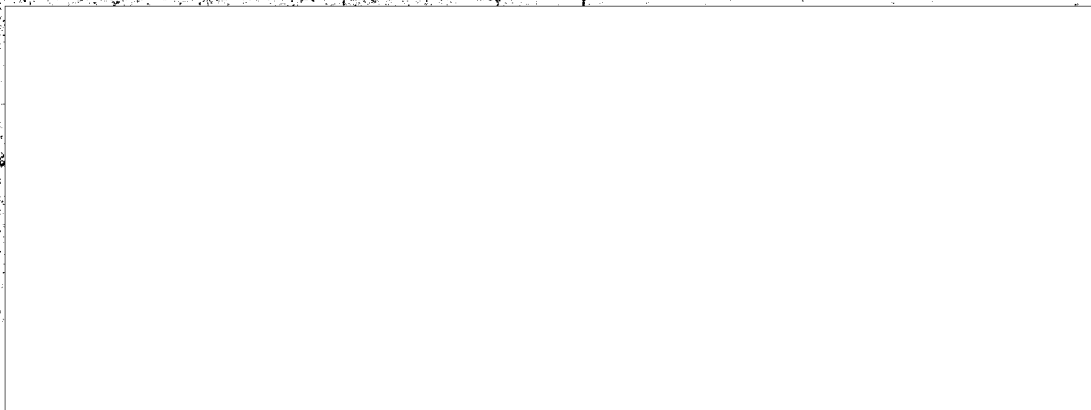
**CHANGES AT
SUSPECT AMM PHASED-ARRAY RADAR
NARO-FOMINSK, USSR
FEBRUARY-APRIL 1964**



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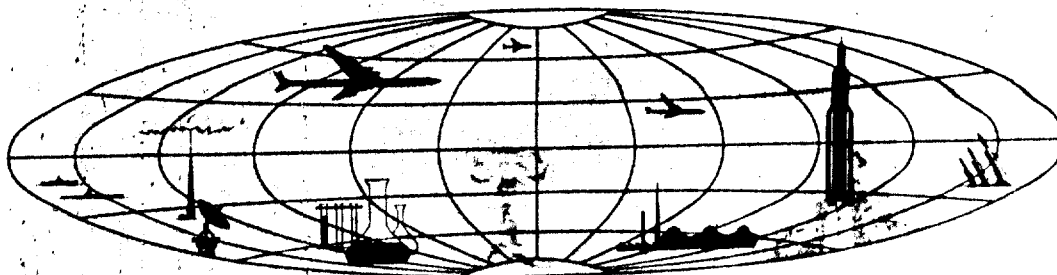


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PREFACE

All measurements contained in this report are the best obtainable within the current limits of the KH-7 system and exploitation techniques. There being no means in the system for determining camera attitude, precise attitude is unknown and planned attitude is assumed. A full analysis of the metric characteristics of strip camera photography has not been completed. Wherever possible, measurements have been cross-checked with collateral information.

- iii -

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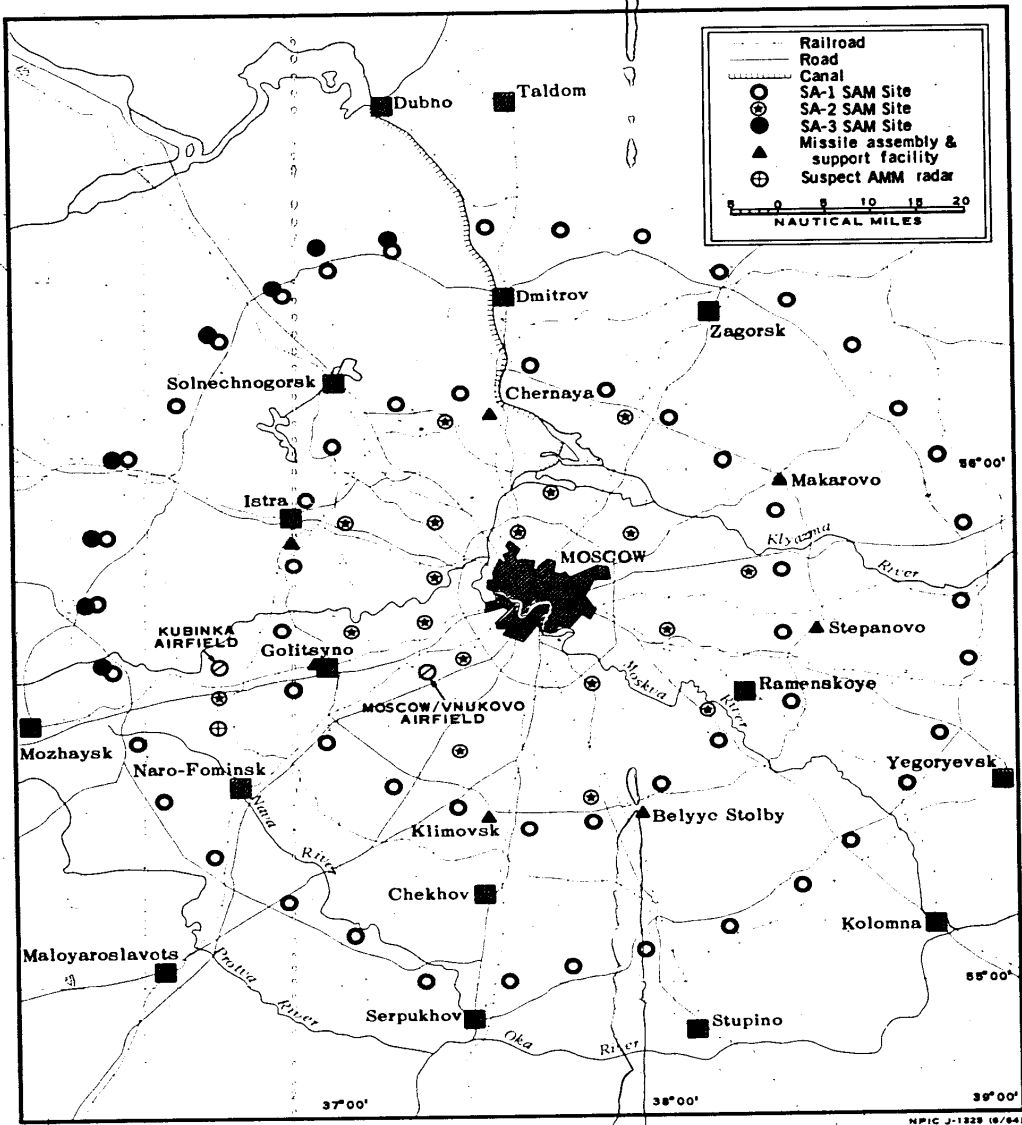


FIGURE 1. LOCATION OF SUSPECT AMM RADAR.

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INTRODUCTION

Photography [] provided the first large-scale, KH-7 coverage of the suspect AMM phased-array radar at 55-29-50N 36-41-10E, 7 nautical miles (nm) north-northwest of Naro-Fominsk and 35.7 nm west-southwest of Moscow (Figure 1). This photography (Figure

2) permits a more detailed description of the suspect phased-array radar and the construction status of the installation than previously published. 1/ A description of changes observed since February follows.

OPERATIONAL AREAS A AND B

Operational Area A. Monocular coverage obtained from [] of the suspect phased-array radar shows that construction of the facility is continuing (Figure 3). A large quantity of construction material is stored in the open throughout the area, the largest quantity being stored in the clearing south of the suspect radar. On photography of February 1964, there appeared to be a snow-covered low earthen wall at the extreme south edge of the cleared area, but April photography shows this to be open storage of construction material. It appears that additional material has been brought into the area since February.

Mensural data obtained from the larger scale photography indicate greater height and width than previously reported for the inverted V-shaped structure. Measurements in this report are from Mission 4007; measurements previously reported 1/ are shown in parentheses for the reader's convenience.

The inverted V-shaped structure measures 340 (320) feet high, 400 (390) feet across the base, and tapers to [] (95) feet at the top (Figure 3). The possible ramp reported on the top of the structure is not visible, and the top now appears as a solid, flat rectangular platform. The sides

of the structure appear 70 (65) feet thick. The two faces of the structure are each 400 (325) feet wide with a slant height of [] (350) feet at an

The north-northwest face is composed of 18 probable steel girders (excluding the two terminal girders) evenly spaced 20 feet apart and at a slant [] 30 minutes to the base. Shadows indicate a similar type of construction on the opposite face of the structure. The open appearance of both faces contrasts sharply with the apparently solid faces seen on February KH-4 photography. The solid-face appearance probably was created by a temporary environmental covering that has been removed with the arrival of favorable weather. Across the base of the north-northwest face, approximately 345 feet of solid light-toned facing material has been positioned on the perpendicular members, indicating that horizontal girders probably are present although not discernible on the coverage of April 1964. A short distance north of this face there are two parallel ground scars that extend the entire width of the structure. This scarring was not visible in the snow in February. On the east side of the structure are two tower cranes ap-

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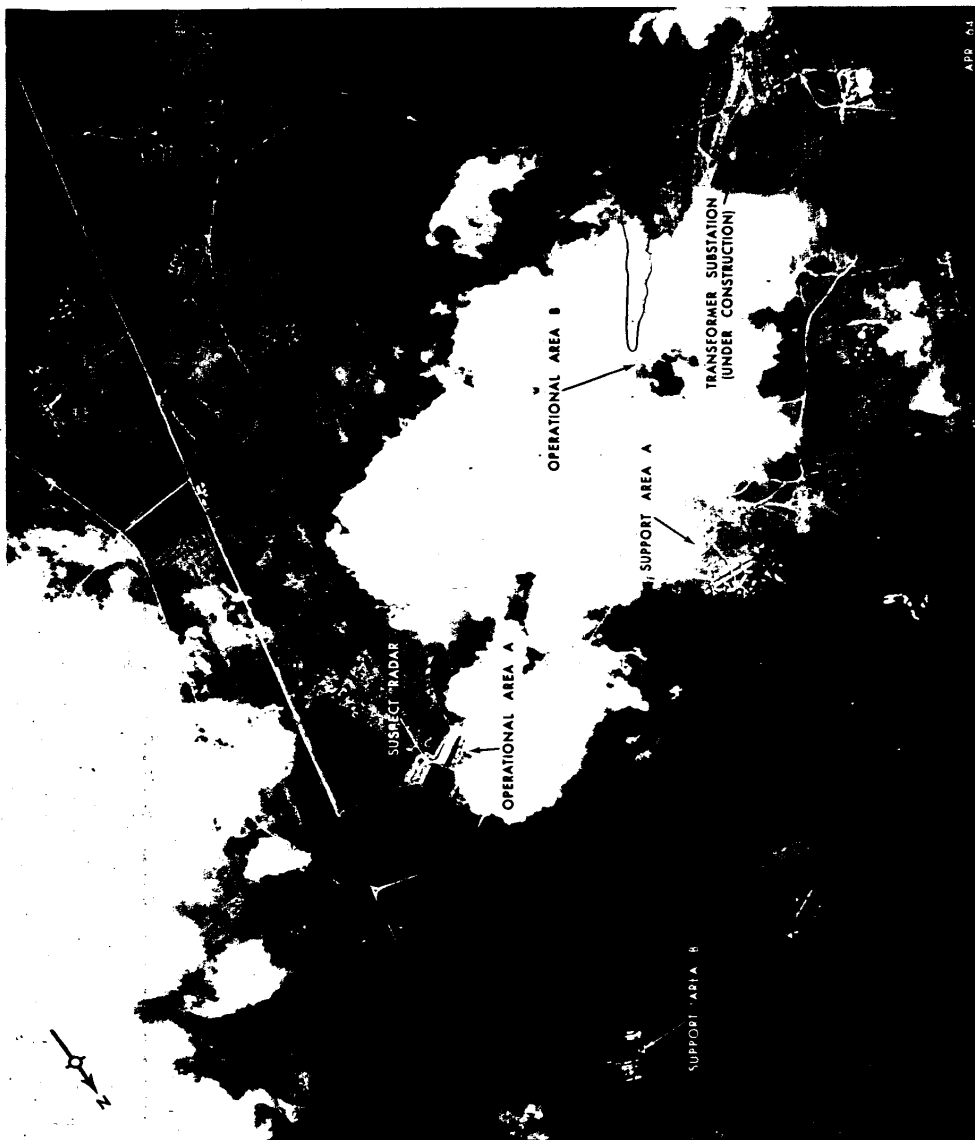


FIGURE 2. SUSPECT ANM PHASE-ARRAY RADAR INSTALLATION.

- 2 -

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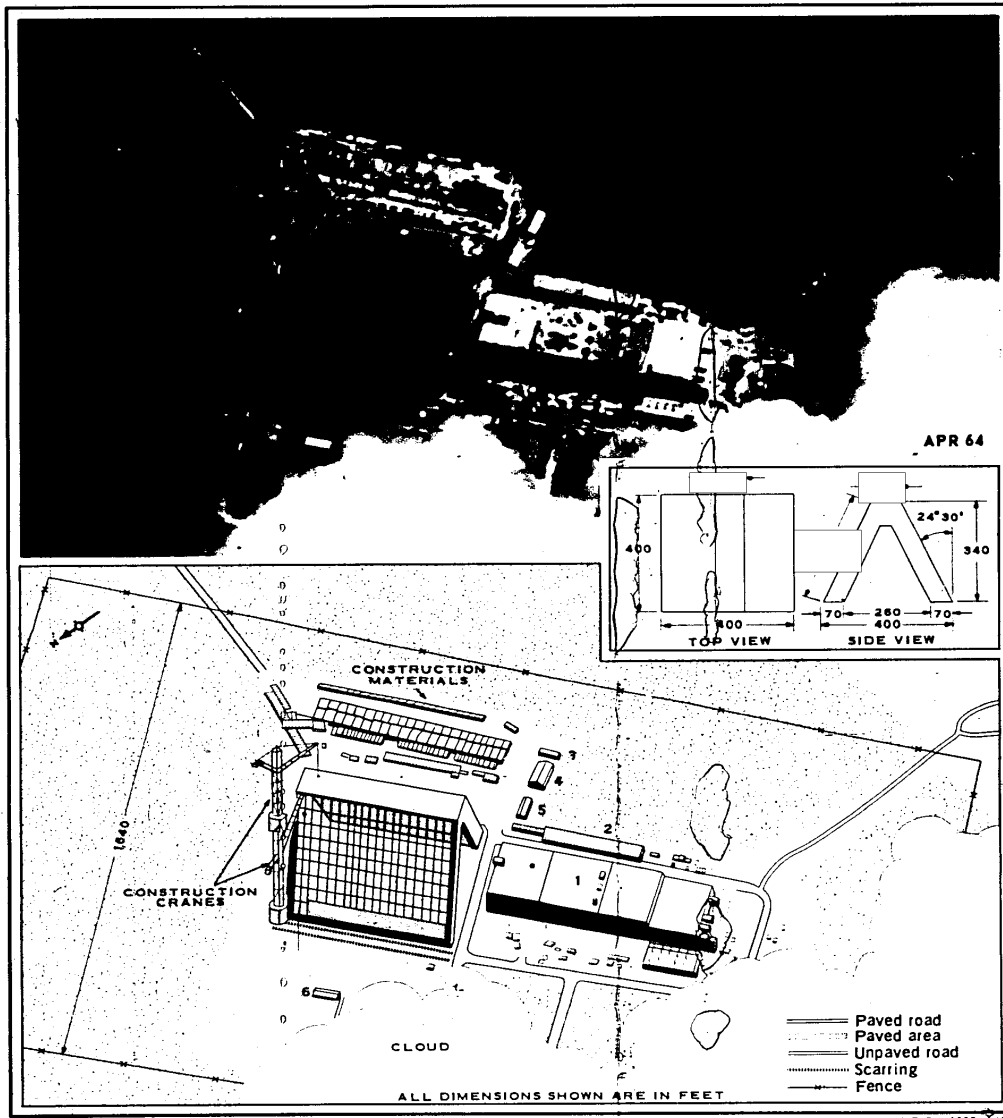


FIGURE 3. OPERATIONAL AREA A.

- 3 -

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NPIC/R-438/64

proximately 330 feet high, one positioned near the center of the structure and the other at the northeast corner.

Construction also continues on the possible control building (Figure 3, item 1), which has unidentified material positioned at various locations on the roof. Refined dimensions for the control building [redacted]

This building has four compartments or bays, each approximately [redacted] with the roof of the west bay appearing slightly lower than the other three. Framework is visible for what appears to be a second level of the annex at the northwest corner of the possible control building, the framework dividing the annex into six [redacted] sections.

Parallel to the possible control building is

a flat-roofed building (item 2) [redacted] proximately 10 feet high (245 by 45 by 10). Roof construction indicates that the building may be of temporary construction. On its east side is an extension that measures [redacted] (65 by 20) feet. Four support buildings not previously discernible have been identified within the operational area: one probably temporary building with a flat roof (item 3); a building with a gable roof (item 4); a building with a gable roof (item 5); and a building [redacted] with a gable roof (item 6).

Operational Area B. Only a small section of the northeast corner of the suspect control building is visible through clouds [redacted]. No changes were observed in the visible portion.

SUPPORT AREA A

Scattered clouds cover portions of this support area on the April 1964 photography. Only one additional building is discernible in the clear area; roads that were obscured by snow in February and that are now apparent are shown in Figure 4. Brief descriptions and measurements from [redacted] follow, with previously reported measurements shown in parentheses. Unless otherwise indicated, all buildings have gable roofs; item numbers are keyed to Figure 4.

- 1 - 2. Barracks-type buildings, data unchanged since February (110 by 25 feet)
3. Barracks-type building, data unchanged since February (130 by 30 by 15 feet high)
4. Fenced area, data unchanged since February (225 by 150 feet)
- 5-13. Support buildings [redacted] (125 by 30 by 15 feet high)

14. Support building [redacted] (50 by 15) feet
15. Support building [redacted] feet (125 by 30 by 15 feet high)
16. T-shaped probable administration building [redacted] (125 by 100 by 40 feet)
17. Support building [redacted] (90 by 25) feet
18. Support building [redacted] (40 by 25) feet
19. Support building [redacted] (90 by 25) feet
20. Newly identified support building [redacted]

Two circular ground scars are visible at the northeast corner of building 6, and at the northeast corners of buildings 8 and 12 there are unidentified circular structures.

- 4 -

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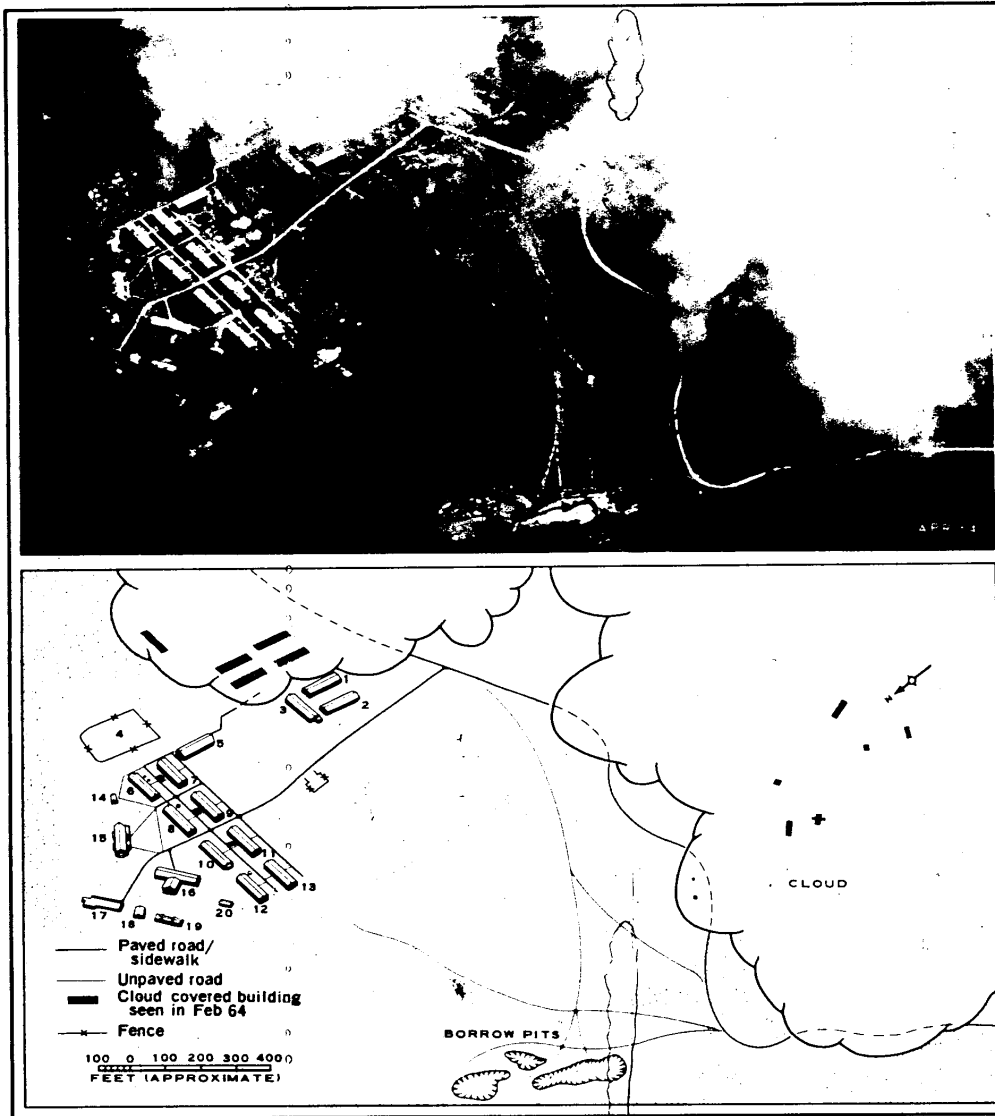


FIGURE 4. SUPPORT AREA A

- 5 -

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FIGURE 5. SUPPORT AREA B.

- 6 -

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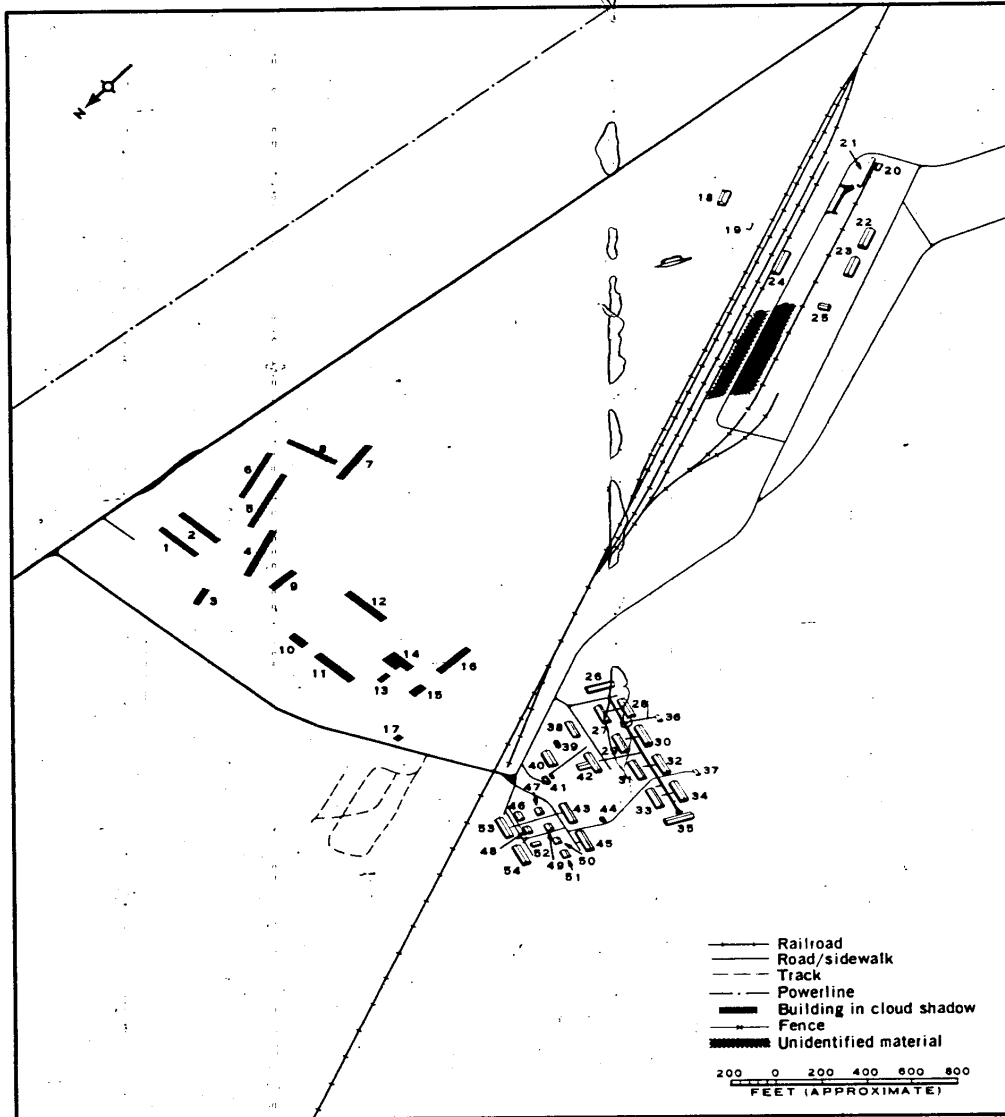


FIGURE 6. LAYOUT OF SUPPORT AREA B.

- 7 -

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SUPPORT AREA B

Support Area B is situated along both sides of the rail line. The eastern section was in heavy cloud shadow on April 1964 photography (Figure 5), precluding accurate determination of changes since February. Just north of the eastern half of the support area and parallel to the rail line are four parallel tracks that were obscured by snow in February. Open storage of unidentified material can be seen within the rail transshipment area on April photography. The brief descriptions and mensural data from Mission 4007 that follow have previously reported measurements shown in parentheses. Item numbers are keyed to Figure 6, and buildings have gable roofs unless otherwise stated.

- 1-16. Cloud shadow, identification only
17. Newly identified support building, measurements undetermined, probably gable roof
18. Support building (100 by 30 by 15 feet high)
19. Newly identified support building, measurements undetermined, probably gable roof
20. Support building, no change in measurements (45 by 25 feet), roof configuration undetermined
21. Support building, no change in measurements (110 by 30 feet)
22. Support building, 135 by 40 (145 by 30) feet
23. Support building 135 by 40 (130 by 40) feet
24. Support building (110 by 30) feet

25. Newly identified support building, measurements undetermined, probably gable roof
26. Barracks-type building (140 by 35) feet
- 27-34. Barracks-type buildings (120 by 25) feet
35. Barracks-type building (140 by 35) feet
- 36-37. Newly identified support buildings
38. Barracks-type building, no change in measurements (120 by 25 feet)
39. Support building (30 by 30) feet
40. Support building (100 by 25) feet
41. Newly identified support building flat roof
42. T-shaped administration building (115 by 70 by 30) feet
43. Barracks-type building (125 by 25) feet
44. Newly identified support building
45. Barracks-type building (125 by 25) feet
- 46-51. Multifamily dwellings (40 by 30) feet
52. Newly identified support building, measurements undetermined, possibly gable roof
- 53-54. Barracks-type buildings (125 by 25) feet.

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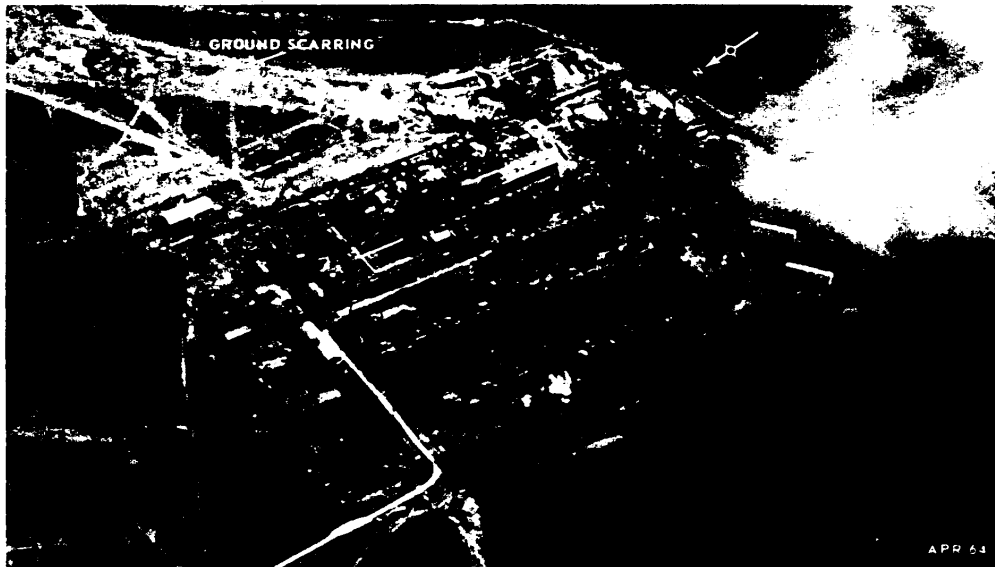


FIGURE 7. TRANSFORMER SUBSTATION UNDER CONSTRUCTION.

OTHER ACTIVITY

A major (500 kilovolt) transformer substation is under construction approximately 1.75 nm (11,700 feet) west of the suspect radar. When completed it probably will furnish power for the installation. On April photography there is no

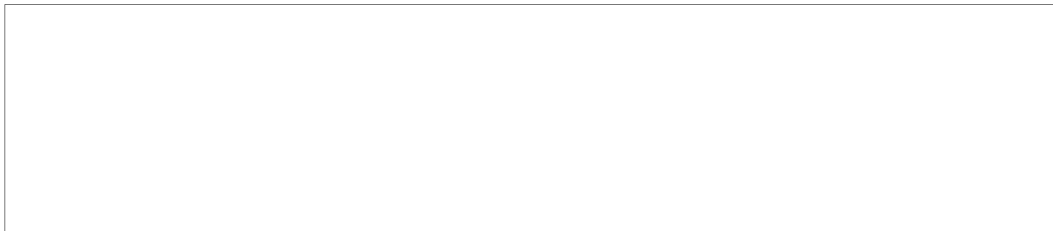
evidence of overhead lines, but there is some indication of ground scarring extending from the substation toward the suspect radar, possibly indicating a buried conduit (Figure 7).

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REFERENCES



MAPS OR CHARTS

DIA. US Air Target Chart, Series 200, Sheet 0167-4HL, 2d ed, Mar 63, scale 1:200,000 (SECRET)

DOCUMENT

1. NPIC. R-215/64, *Suspect AMM Phased-Array Radar, Naro-Fominsk (Moscow Area), USSR*, Apr 64 (TOP SECRET CHESS RUFF)

REQUIREMENT

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NPIC PROJECT

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